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ORGANIZATION
of
CHEMICAL WARFARE COURSES

by
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Now being passed out are some outlines* that we would like to have you use in arranging your courses for physicians when you return home. Before discussing this outline in any detail, I would like to say a few words about the entire educational program that has been planned and which is now being carried on in Regions 6 and 7.

In the early days of the War Emergency, instruction in the medical aspects of chemical warfare was carried out in a rather haphazard fashion and a good deal of time was wasted by not having a planned program of instruction. Last February an attempt was made by the Office of Civilian Defense to standardize a training program for physicians. A course was offered at the University of Cincinnati. Physicians from the Atlantic Seaboard States were invited to attend. Those of us who went to that course returned to our respective states and organized courses of instruction for local physicians. During the spring and early summer an attempt was made, chiefly through the efforts of Dr. Rutstein, to assemble the most suitable methods of instruction and the most useful types of material for use in subsequent courses. It seemed advisable to invite the participation of the medical school faculties in carrying on this teaching program. As a result, the present type of school was developed to train physician instructors. The present school is the sixth of its kind. Previous courses were given at the Massachusetts Institute of Technology, the Edgewood Arsenal, and at the University of Cincinnati Medical School.

It is not intended that the medical schools should have responsibilities beyond the furnishing of teaching personnel to carry out the necessary instruction of physicians in their respective States and communities. The State Chiefs and their staffs of the Emergency Medical Service will be asked to organize the necessary schools in their States. They will designate the physicians that are to be required to attend. The State, county and local medical societies will be invited to cooperate to the extent of giving appropriate notice of the scheduled courses in their journals, preferably with editorial comment regarding the objectives and importance of such training. The National and Regional Officers of the Office of Civilian Defense will provide

*Course Outline: Medical Aspects of Chemical Warfare, Emergency Medical Services, Office of Civilian Defense.



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the materials that are needed for your courses and will aid in every way possible in making the necessary arrangements.

This course outline that we have given out is intended to serve as guide to a six-hour course. Such an abbreviated course of instruction is obviously a compromise between an inclusive, well-rounded program such as you are receiving here in three full days and one occupying the amount of time that the average physician will be able to devote to such training.

It should be possible, with the use of this outline, to arrange two types of schools: (1) a course to be presented in three sessions of two hours each; (2) a one day course lasting through an afternoon and evening. In those areas where the courses will be given for a group of communities away from your medical schools, it will probably be advisable to arrange the latter type of course. Following an afternoon session of four hours, you might care to arrange an informal get together, perhaps a dinner and discussion, and then complete the course that evening or the following morning.

It is recommended that you men, upon returning to your schools, should enlarge your teaching staff as much as you think is necessary. Perhaps you will wish to add a chemist, a physiologist or a pathologist. Certain portions of this six-hour outline can be assigned to these teachers and you can provide them with the necessary literature. If possible, we should then like to have you offer a course to your entire faculty and third and fourth year students. This has been done in most of the schools previously established in the East. Such courses can be offered either as part of the medical school curriculum or as evening exercises in one or two hour sessions.

Following the course of instruction within your own schools, it is recommended that you cooperate with the State Chief of the Emergency Medical Service in arranging other schools in strategic areas throughout your State. In States where there are two or more medical schools it may be desirable to combine your faculties and to make up two or more mixed teaching staffs, or it may be advisable to maintain single teams from each school.

In any case, it should not be too great an undertaking for the medical school faculties to teach the number of courses that a given State may require.

The materials for use in such a teaching program will be furnished to you by the Office of Civilian Defense, either directly from the office in Washington, D.C., or through your State Chief of Emergency Medical Service by way of the Regional Office. Literature such as we have issued here and gas masks will be available for your schools. Such material has, in the past, been made available by direct shipment from Washington to one representative of each of the medical schools.

You have in your folders a list of publications (bibliography) from which you can obtain more detailed information than your lecture notes will contain. Some of these books, monographs, and pamphlets will contain illustrations that you may wish to have reproduced in the form of lantern slides. The cost of lantern slide preparations has been borne, in some States, by the Defense Councils. Warthin and Weller's book on mustard poisoning and Winternitz' book are good sources from which lantern slide illustrations can be copied.

Now as to personnel that should attend the courses that you will be asked to teach. The responsibility for the attendance of the appropriate number of physicians rests with the State and Local Chiefs of Emergency Medical Service. In addition to such physicians as may be asked to attend your schools, there will doubtless be many doctors who will wish to attend in order that they will be better prepared to handle chemical casualties should chemical warfare agents ever be used.

It is quite obvious that the need for these schools will vary from State to State and from community to community within a State. For this reason the State Defense Council will be asked to arrange the number of courses that will provide adequate coverage of the communities within their State.

This program for the instruction of physicians is going along parallel with the courses of instruction for the gas officers such as Mr. Cary mentioned to you yesterday. War Department Civilian Protection Schools have been established in several Regions. These schools provide courses for the training of non-medical gas officers of several categories. As you will see in the exercises scheduled for tomorrow morning, the actual problem related to decontamination and gas cleansing will have to be dealt with by the local community gas defense organization. It is therefore important that the total teaching program should have as its final objective, the training of suitable medical and nonmedical personnel to organize a workable local gas defense. As Mr. Cary explained to you yesterday morning, the Senior Gas Officer is the person in each community who will have the greater responsibility in the establishment of the program. Physicians should look to him for advice and should cooperate with him fully. However, the physician is going to be occupied chiefly with the management of injured and gassed casualties and with arrangements for the proper cleansing of contaminated persons. When you have seen the enactment of the process of gas cleansing that will be illustrated for you tomorrow, I think you will appreciate that the responsibility for the cleansing of persons is a very large one.

Let us now turn to the short course outline we have passed out to you. It should not be necessary to go through the outline in

any great detail since it follows quite closely the pattern of the course that you are attending here. There are a few errors that I will ask you to mark on your copies.

Among the pamphlets that were given out to you is one entitled "How to Protect Yourself Against Gas," Operations Letter No. 46. This communication describes in the simplest terms possible the steps in the personal cleaning that have been recommended for the use of individuals who are gassed but otherwise uninjured. Considerable attention should be given to the contents of this directive in your courses of instruction.

Item IV on page 12 of your outline "Improvised Protective Clothing" should also be stressed in your teaching because it is unlikely that the average person will be supplied with protective clothing.

Considerable emphasis should be placed on these home treatments, "Self Aid and First Aid" and on improvised protective measures when these courses are taught to physicians from the local communities.

Are there any questions?

QUESTION: On page 12 it speaks of protective clothing and lists rubber sheeting and other rubber material. We understood that rubber gloves are not very satisfactory for mustard gas.

DR. BENNETT: It is true that surgical rubber gloves are not satisfactory for any long period of time. They will, however, give temporary protection. For the handling of liquid mustard, the heavy acid proof rubber gloves, used over treated cotton gloves, are recommended. Light-weight gloves will, however, give protection for short periods of time, particularly if the hands are dipped in hypochlorite solution or dichloramine-T from time to time. Rubber aprons also give some protection, especially in the cleansing room of a cleansing station where the concentrations of gas should not be high.

QUESTION: Has there been any emphasis laid on the subsequent handling of material that has been contaminated, rubber aprons for instance, that have been contaminated?

DR. BENNETT: When improvised clothing has been used in order to procure some protection in an emergency, it is likely that such materials will have to be destroyed. It is well to bear in mind that waterproof cellophane constitutes a very good type of improvised protective clothing. Bags can be made out of it to cover the arms and hands. Aprons can also be improvised. Where there is to be continuous operation of a hospital cleansing station, it will be necessary to have impregnated gloves and

acid proof rubber gloves and complete protective suits in order to provide adequate protection. Temporary protection could, however, be obtained by using improvised materials.

QUESTION: If this course is to be established, is it to be the local assistant's job to take the initiative, or is that the function of the university or the State Medical Service?

DR. BENNETT: These teaching programs should be organized by the Emergency Medical Chief, after consulting with the teaching personnel from the medical schools. The State Chief can make the necessary arrangements with the officers of the State and county medical societies. An advantage to be had by conferring with the editors of the medical journals is that through them you can bring the proper notices of your meetings to the attention of all local physicians and possibly have suitable editorials written calling attention to the importance of the schools.

I have neglected to cover one objective we have in mind in this type of training for physicians. The information you will have access to for your present courses will lay a foundation for the medical management of gas casualties. If chemical agents should be used upon our civil populations in this war, there will doubtless be considerable new information concerning treatment of these cases that will need to be disseminated quickly and accurately. Such schools as the ones now being set up will provide an appropriate channel for the release of such information.

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